No. 645,851. Patented Mar. 20, 1900.

A. S. HEBERT.

CANE CART LOADER.

(Application filed May 14, 1897.)

(No Model.) 2 Sheets—Sheet 1.

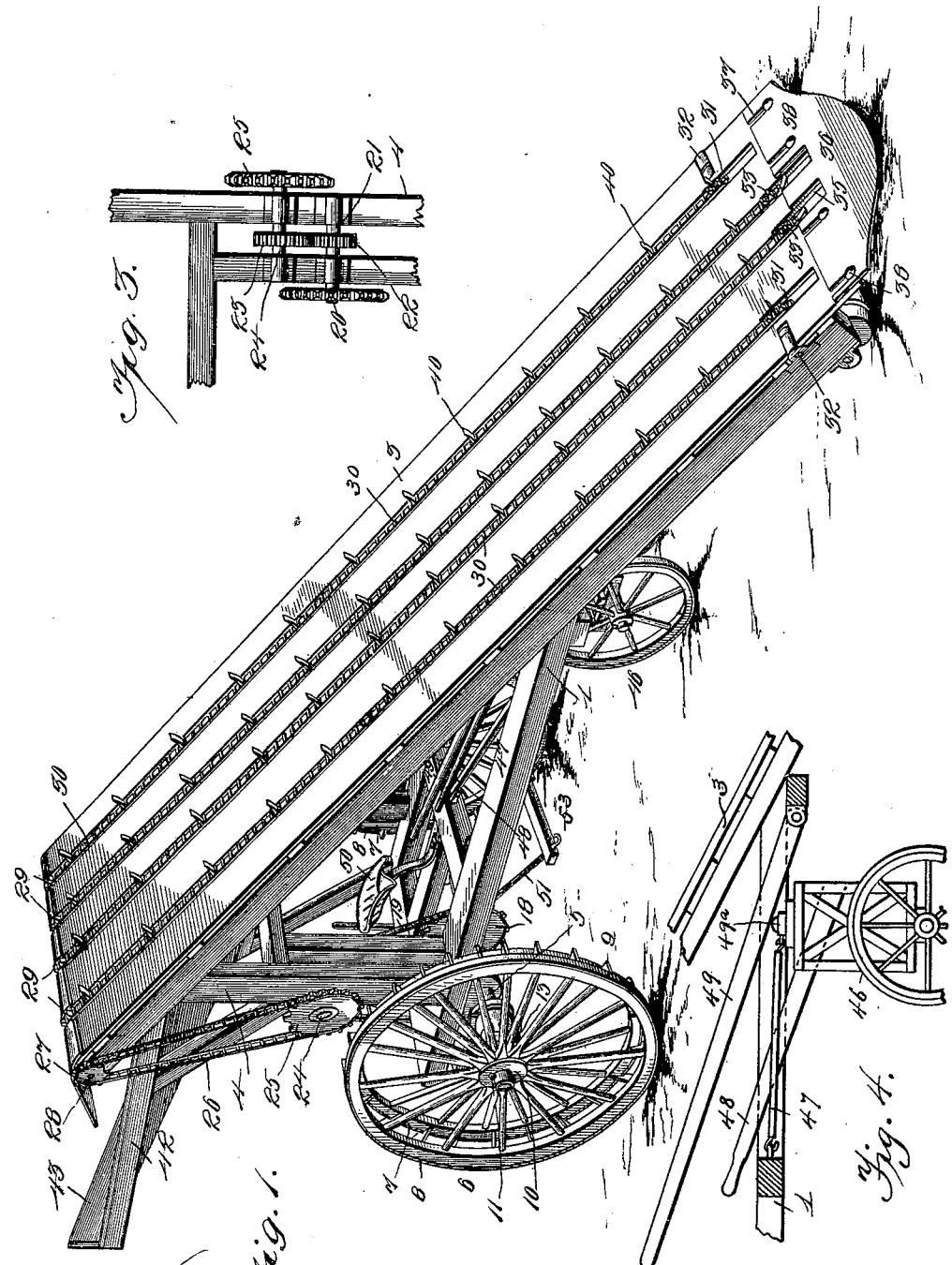

Fig. 1.

Fig. 3.

Fig. 4.

Witnesses
L. Keeth.
Victor J. Evans

Inventor
Albert Sidney Hebert,
By John Wedderburn. Attorney

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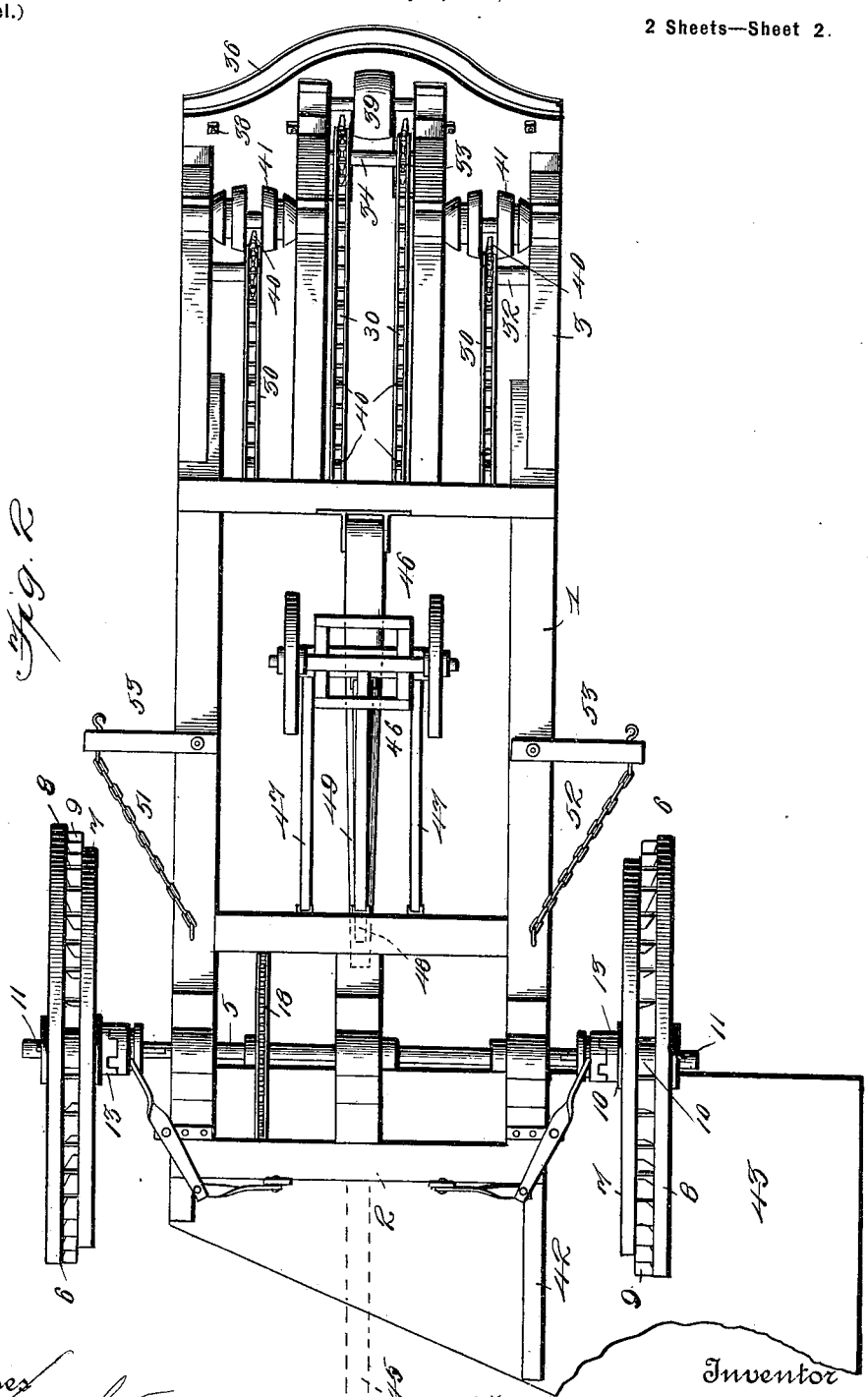
Fig. 2.



Witnesses
H. Koerth
Victa J. Evans

Inventor
Albert Sidney Hebert,
By John Wedderburn. Attorney.

UNITED STATES PATENT OFFICE.

ALBERT SIDNEY HEBERT, OF PLAQUEMINE, LOUISIANA.

CANE-CART LOADER.

SPECIFICATION forming part of Letters Patent No. 645,851, dated March 20, 1900.

Application filed May 14, 1897. Serial No. 636,579. (No model.)

To all whom it may concern:

Be it known that I, ALBERT SIDNEY HEBERT, of Plaquemine, in the parish of Iberville and State of Louisiana, have invented certain new and useful Improvements in Cane-Cart Loaders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to machines for loading cane; and the object of the same is to produce an improved machine for removing the cane from the furrows upon which it is piled after having been cut and conveying the same to a cart or wagon to receive the same.

When cane is cut, it is placed across rows or furrows, a space being left between the cane and the bottom of the furrow. Heretofore it has been the custom to remove the cane from the furrows by hand, the laborer placing one arm in the space between the same and the furrow and the other arm on top of the cane, thereby raising an armful and placing the same within the cart or wagon provided therefor. This operation of loading the carts by hand is expensive, as considerable time is required to load a single cart and a large number of men must necessarily be employed. By the use of my machine three men can do the same work that formerly required from thirty to thirty-five.

The invention consists in the novel features of construction hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view. Fig. 2 is a bottom plan. Fig. 3 is a detail rear view showing gearing. Fig. 4 is a broken longitudinal section showing the steering-truck, the connections between the same and the frame of the loader, and the relative arrangement of the lifting-lever 49.

Referring to the accompanying drawings, 1 indicates the side pieces of the supporting-frame, which are connected at their rear ends by the cross-pieces 2 and at their forward ends are secured to the inclined frame 3. Secured at their lower ends to the side pieces 1 are the vertical uprights 4, which at their upper ends are secured to the inclined frame 3. Journaled in the side pieces 1 is the driving-shaft 5, upon the ends of which are loosely journaled the supporting-wheels 6. These wheels 6 are provided with the inner and outer rims 7 and 8, respectively, the outer rims being larger in diameter than the inner, said rims being connected by the lugs 9, which are flush with the outer rims, as illustrated. The object of this construction is that as the machine is moved between the ridges or furrows which support the cane the outside rims of the wheel will rest on the outer edges of said ridges and the inside rims will rest on the ridges forcing the lugs into the ground, and thereby preventing the wheels from slipping. Collars 10 secure the wheels in position, through which and the shaft 5 extend flat keys 11 for securing the collars to the shaft. These keys extend into keyways upon the shaft 5, so that the wheels may be brought together closely or separated, as desired, according to the distance between the ridges of the cane-row.

Secured upon the shaft 5 is the sprocket-wheel 18, around which passes a sprocket-chain 19, which also passes around the sprocket-wheel 20 upon a shaft 21, which is journaled upon the upright 4. Upon this shaft 21 is a gear-wheel 22, which intermeshes with the gear-wheel 23, secured to the shaft 24, which is also journaled upon said upright. Upon the end of this shaft 24 is a sprocket-wheel 25, around which passes a sprocket-chain 26, said chain also passing around the sprocket-wheel 27 upon the shaft 28, journaled at the upper end of the inclined frame 3. Upon this shaft 28 is a series of sprocket-wheels 29, there being four in the present instance, around which sprocket-wheels pass the sprocket-chains 30. The outer sprocket-chains 30 of the series pass around sprocket-wheels 31, journaled upon a shaft 32 at the lower end of the inclined frame, said sprocket-wheels 31 being adjacent the ends of said shaft. The central sprocket-chains of the series continue downward around sprocket-wheels 33, journaled upon a shaft 34, which is journaled at the lower end of the frame.

Secured upon the lower end of the frame is a scoop 36, which is provided with slots 37, through which bolts 38 pass, by means of which it is adjusted upon the frame.

Journaled within the lower end of the frame

are the rollers 41, which are so mounted upon their shaft as to leave spaces between their adjacent edges. The outer sprocket-chains 30 are adapted to move in these spaces, whereby the fingers or hooks 40, carried by said chains, engage the cane when the lower end of the machine is projected therebeneath. These rollers 41 when secured upon the shaft form a large roller of substantially barrel shape, the same being so formed as to readily move between the furrows which support the cane. These rollers are provided for the purpose of preventing the lower end of the scoop from engaging the ground. Roller 39 is also provided beneath the inclined frame, at the middle thereof, for engaging the earth between the ridges.

From the foregoing description it will be seen that when the machine is moved forward and the mechanism thrown in gear the upper series of sprocket-wheels are rotated in a direction opposite to the rotation of the wheel, so that the sprocket-chains are moved upward from the lower end of the inclined frame, the cane being engaged by the fingers carried by the sprocket-chains and elevated to the upper end of said frame.

Upon the rear end of the machine-frame are the brackets 42, which support the chute 43. The cane which is elevated by the elevating-chains is conveyed to the chute and passed therethrough upon the cart or wagon positioned alongside the machine and beneath the lower open end of the chute.

The tongue 45 is secured at one end to the supporting-frame and extends rearward, the animals being attached to the tongue behind the loader.

Supporting the inclined frame, between its extremities, is the steering-truck 46, and connecting the frame of this steering-truck with the machine-frame is the reach 47. An operating-lever 48 is secured at one end to the steering-truck frame and at its opposite end extends rearward within convenient reach of the operator, by means of which the machine may be steered. An operating-lever 49 is secured at one end to the inclined frame and its opposite end extends rearward within convenient reach of the operator, the lever bearing on axle or bolster 49^a of the steering-truck, whereby when pressure is applied the lower end of the inclined frame is raised from the ground for the purpose of turning the machine.

A seat 50 is provided for the operator, the same being situated adjacent the clutch-operating levers and the levers for steering the machine, whereby the machine may be conveniently operated.

In order to furnish means for coupling the cart with the loader and in order that they may be kept in a constant relation with each other, I connect with the frame of the loader laterally-projecting arms 53 53. These arms are provided with a hook for convenient connection with a chain attached to the cart or for the attachment of a singletree, through which an animal may be attached to assist in the forward movement of the loader. These arms are stayed or braced by means of chains 51 52.

The operation of my invention is as follows: The machine is adapted to move between the furrows upon which the cane is piled and an empty cart driven along the machine under the chute. The clutches are moved in engagement with the wheels to cause the shaft to rotate therewith, and the sprocket-wheels are thus revolved. Motion is thus imparted to the sprocket-chain, and the fingers carried thereby engage the cane and convey the same to the chute at the upper end of the inclined frame, where it is deposited upon the cart. The scoop at the lower end of the machine passes under the cane and close to the ground, and the cane is first caught by the fingers in the center chain, which are adjacent the lower end of the scoop. As soon as the hooks on the center chains engage the cane the latter is carried upward until engaged by the fingers of the side chains. When it is desired to turn the machine at the end of the row, the lever 49, which is secured at one end to the inclined frame, is depressed, whereby the weight of the lower end of the machine is shifted to the truck, and the rollers at the lower end are lifted off the ground, and the machine is then turned by the lever 48 for that purpose, as will be readily understood.

Having thus described the invention, what is claimed as new is—

1. The combination of carrying-wheels, a main supporting-frame mounted on said wheels, an elevator carried by the supporting-frame, rollers for carrying the front end of the frame, a steering-truck intermediate the rollers and carrying-wheels, and means operatively connected with the truck and frame for raising the forward end of the frame, substantially as described.

2. In cane-loaders, the combination of carrying and driving wheels, a main frame carried by said wheels, an inclined elevator carried by the main frame consisting of endless chains or belts, an adjustable extension connected with the lower end of the elevator, a roller journaled in the lower end of the main frame, and side rollers near the lower end of the elevator having grooves to permit the passage of the sprocket-chains.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

ALBERT SIDNEY HEBERT.

Witnesses:

CHAS. E. DUPUY,

ALEX. HEBERT.